

Operator Examiner

News for Wastewater Treatment Professionals

Operator Certification Exam Dates Set for 2006



Pursuant to IC 13-18-11 and 327 IAC 5-22, notice is hereby given that the Wastewater Treatment Plant Operator Certification Examinations of all industrial and municipal classes are scheduled as follows:

Exam Date	Postmark Deadline
April 27, 2006	March 13, 2006
October 12, 2006	August 28, 2006

IDEM will notify eligible applicants of their particular testing location approximately one month before the date of the exam or upon acceptance into the examination class. Municipal exams (Classes I-SP, I, II, III and IV) will be held in the morn-

ing; Industrial exams (Classes A-SO, A, B, C and D) will be held in the afternoon. To be considered for eligibility, your completed application and \$30 exam fee (payable by check or money order made payable to "IDEM") must be postmarked by the above deadline and mailed to: Indiana Department of Environmental Management, MC 50-10C, 100 N. Senate Ave., Indianapolis, IN 46204-2251.

Exact time, location and a map will be provided with the admissions letter. An admissions letter and a government-issued photo ID will be REQUIRED for admission into the exam. Calculators may be used for the exam, provided that they are not capable of storing text. However, cell phones will NOT be permitted into next year's exams.

Important!

Plant Security Questions Will be Included on the Municipal Exams!

Questions will be based on the publication "Protecting Your Community's Assets: A Guide for Small Wastewater Systems." A PDF version of this guide can be downloaded from West Virginia University's Web site at www.nesc.wvu.edu/netcsc_index.htm (scroll down the page to find links to Parts 1-4 of the guide). The guide also can be found at the end of IDEM's Wastewater Operator Certification Manual (January 2005 or later edition).



Exam applications, study guides, the exam book list and links to exam references can be found on the Wastewater Operator Certification Web site at www.idem.IN.gov/water/compbr/comeval/wwcert.html.

Top Scorers Share Study Strategies That Lead to High Scores!

We wanted to further assist individuals seeking guidance on the best way(s) to study for the wastewater exam, so we compiled a short survey and contacted each of the high scorers in the Class I, II, III, IV, A, B, C and D exams from this past spring, 2005. We wanted to determine their study strategies and which references they had found most useful.

The following is a compilation of the questions we asked and the various answers we received:

Continued on page 2...

Security Training Workshop for Small POTWs to be Held in December

The Water Environment Federation (WEF), in cooperation with the U.S. Environmental Protection Agency, is providing a Security Training Workshop targeting "small" POTWs (those treating 2.5 - 5 MGD). Other utilities and local government officials may attend—contingent on seating availability. The three-day security workshop is designed to provide POTWs with the necessary tools to initiate a vulnerability assessment and develop a security plan

Continued on page 2...

Continued from page 1...

Top Scorers Share Study Strategies...

■ *How much time would you say that you spent studying for the exam?*

Class I: 120 hours	Class A: 21 hours
Class II: 1000 hours	Class B: 50 hours
Class III: 90 hours	Class C: 14 hours (had prior D)
Class IV: 4 hours	Class D: 15 hours (had prior IV)

■ *Which study materials did you use?*

Study guide?	I, III, IV, A, B, C
Sacramento Books?	I, II, III, IV, A, C, D
Rules/Regs?	I, II, III, IV, A, B, C, D

■ *Did you enroll in any courses specifically designed to help you pass the test, or any kind of exam prep course?*

Class I: Yes	Class A: Yes, one at plant
Class II: Yes, online	Class B: Yes
Class III: No	Class C: No
Class IV: No	Class D: No, used material from C/III

■ *Which study material did you find most helpful?*

Class I: Study guide	Class A: Study guide, rules/regs
Class II: Sacramento books	Class B: Exam prep class
Class III: Sacramento books	Class C: All, worked math too
Class IV: Operator's manual, study guide, books	Class D: Previous exam prep class, rules/regs

■ *Now that you have taken the exam, is there some material that you think you should have spent more time studying?*

Class I: Rules/regs	Class A: Disinfection
Class II: Rules/regs	Class B: No
Class III: No	Class C: No, but if had not had study guide would have focused on wrong things.
Class IV: Solids handling	Class D: Sacramento books

■ *How would you rate the difficulty of the exam?*

Easy?	None
Average?	Yes, I, IV, B, C
Difficult?	Yes, II, III, A, D
Very difficult?	None

■ *How would you advise anyone wishing to take the exam as to study materials?*

Class I: Read and study as much as you can.
Class II: Know the Sacramento books and study guide, or take a course.
Class III: Read, re-read, re-read again, talk to people, visit other types of systems, and know how other types of systems operate.
Class IV: Concentrate on study guide, the operator's manual and Sacramento books.

Continued on page 3...

Continued from page 1...

Security Training Workshop...

designed for each utility's specific needs. The training is provided at "no-cost" and will feature the Vulnerability Self-Assessment Tool (VSAT) wastewater software. POTW managers and operators are encouraged to take advantage of this opportunity to receive hands-on training on how to develop a list of priorities to help secure their facility's key assets through appropriate countermeasures.

*Security Training
Workshop
Location & Date*

Santa Barbara, CA
December 13-15, 2005

There is no charge for the WEF POTW Security Workshop. POTW staff may also be eligible for travel scholarships for reimbursement of reasonable transportation and lodging expenses upon request, if staff members are traveling 100 miles or more to participate in the workshop. In order to attend, all participants **must** pre-register. For detailed information regarding travel scholarships and registration, please visit Water Environment Federation's Web site at <http://seeuthere.com/wastewater-security>, or contact Matt Jones of WEF by e-mail at mjones@wef.org or by phone at (703) 684-2400, ext. 7090. Mr. Jones' fax number is (703) 684-2413.



IDEM Adds Weekly Report on Sewer Overflows to its Web Site

On September 26, 2005, the Indiana Department of Environmental Management added information to its Web site that will help citizens track sewer overflows in their neighborhoods. Updated on Fridays, the site will include all overflow problems reported to IDEM that week. The page can be accessed on the Web at www.idem.IN.gov/water/compbr/compeval/ssoreport.html.

A sanitary sewer system is a wastewater collection system that is specifically designed to collect and convey only sanitary wastewater (domestic sewage from homes as well as industrial and commercial wastewater). Storm water is conveyed through a separate set of pipes.

Some sanitary sewer overflows (SSOs) occur when collection system capacity is exceeded because of wet weather (rain water or snow melt). During dry weather, normal flow may be blocked for any of several reasons, and mechanical failures may prevent the system from operating properly.

When a system experiences an SSO event, the owner must report that event to the Indiana Department of Environmental Management within 24 hours of the event. Treatment plant bypasses, which are releases of untreated or partially treated wastewater occurring at a wastewater treatment plant, must also be reported to IDEM within 24 hours.

This list does not include precipitation-related combined sewer overflow releases (CSOs) from authorized CSO outfalls, which are reported monthly. Visit www.idem.IN.gov/water/npdes/permits/wetwthr/cso/index.html to learn more about CSOs.

IDEM (www.idem.IN.gov) implements federal and state regulations regarding the environment. Through compliance assistance, incentive programs and educational outreach, the agency encourages and aids businesses and citizens in protecting and improving Indiana's environment. IDEM pursues enforcement action when a party disregards safety and endangers human health.

Continued from page 2...

Top Scorers Share Study Strategies...

- Class A: Start early, don't try to cram, do the end of chapter tests in Sacramento books, and take a course.
- Class B: Use the study guide and use the rules/regs.
- Class C: Use the technical materials, use the rules/regs.
- Class D: Use everything on the book list and take a course.

■ For future exams that you might take, will you study any differently?

- Class I: May not take any more exam prep classes, but would study the same.
- Class II: No
- Class III: No, studied harder for this test than for I or II, would also have to study hard for the IV.
- Class IV: n/a
- Class A: Start earlier, at least six weeks ahead.
- Class B: No, but would recommend taking the corresponding tests together such as II and B same day, makes studying and passing easier.
- Class C: Would spend more time studying technical issues for the D.
- Class D: n/a



Indiana Communities Leading the Way for a Cleaner Environment



Three Indiana communities are leading the way for a cleaner environment and an improved quality of life for Hoosiers. The cities of Lawrence and Muncie, and the Town of Ogden Dunes are pilot participants in the Indiana CLEAN Community Challenge program administered by the Indiana Department of Environmental Management.

Susan MiHalo, Ogden Dunes Environmental Advisory Board, encouraged her community to participate in the Indiana CLEAN Community Challenge as "a way to walk the talk and lead by example to encourage neighboring

industries and citizens to be more aware of their impact on the environment and surrounding communities."

"Participating as a pilot in the Indiana CLEAN Community Challenge provides a unique opportunity to address other environmental areas with the commitment and dedication that has brought national and international recognition to Muncie for our water quality efforts in the West Fork of the White River. Implementing CLEAN will mean an improved quality of life for our citizens and the student population at Ball State University," said Richard Huyck, director of Muncie's Bureau of Water Quality.

The Indiana CLEAN Community Challenge encourages communities to select activities that provide a local benefit and improve the community's quality of life versus state or federal government mandating specific projects.

"The Indiana CLEAN Community Challenge is a great way to receive recognition from the state for achieving goals best suited for our community," said Vicki Perry, CLEAN stakeholder leader at Lawrence.

Lawrence, Muncie, and Ogden Dunes are expected to attain Indiana CLEAN Community designation during the early spring of 2006.

For program information, contact IDEM's Office of Pollution Prevention and Technical Assistance toll free at (800) 988-7901, or visit the Indiana CLEAN Community Challenge Web site at www.cleancommunities.IN.gov.



Enforcement Updates

One of the duties of IDEM's Office of Enforcement is to take administrative action when a certified operator has violated any of the three criteria set forth in IC 13-18-11-8:

- The operator has practiced fraud or deception;
- The operator has not used reasonable care, judgment, or the application of the operator's knowledge or ability in the performance of his/her duties; or
- The operator is incompetent or unable to properly perform his/her duties.

The outcome of these enforcement actions can range from a period of probation to a permanent ban on that person from performing the duties of a certified operator. Some cases have involved civil penalties. The Office of Enforcement understands that the great majority of certified operators are both competent and conscientious. However, when a bad actor is identified, action needs to be taken.

In a recent case settlement, a certified operator agreed to give up both his drinking water and wastewater licenses, and to never again perform any duties of a certified operator in the state of Indiana. Several other cases are pending settlement at this time.

Brownstown Wastewater Facility Selected as Regional and National First Place Operation and Maintenance Award Winner

The Town of Brownstown, located in Jackson County, Indiana, has been selected to receive a Region V U.S. Environmental Protection Agency Wastewater Operation and Maintenance (O&M) Excellence Award for First Place in the small advanced category for 2005. Brownstown is one of nine wastewater utilities to receive regional O&M awards this year.

The Brownstown plant is designed to treat a flow of 690,000 gallons per day (receiving an average of 467,000 gallons per day), while serving a population of nearly 3,500 in an area covering 2.2 square miles. All of the flow received comes from domestic and commercial sources. The plant does an outstanding job of pollutant removal, consistently removing an average of nearly 99% of the biochemical oxygen demand and suspended solids, and 96% of the phosphorus from the incoming wastewater. Major treatment processes include preliminary treatment, biological treatment in oxidation ditches (equipped for biological phosphorus removal), final clarification, ultraviolet disinfection, and post-aeration prior to discharge to the East Fork of the White River. Sludge is aerobically digested, dewatered by belt filter press, chemically treated with lime,

and applied to agricultural land.

This award is based primarily on the following achievements (in addition to excellent pollutant removal): (1) Due to extensive automation, plant staff now have the ability to control certain parameters from remote locations by means of laptop computers, so

that whoever is on call can monitor and react to plant equipment malfunctions; (2) Installation of sludge dewatering equipment has allowed use of existing aeration tanks for sludge holding, thus eliminating the need for separate holding tanks; (3) The computerized maintenance management program has improved plant efficiency, by minimizing downtime of major equipment, simplifying scheduling of repairs, and allowing staff to quickly see equipment maintenance history and trends; and (4) By utilizing in-house staff for mapping of the collection system using GPS equipment, the plant has saved the city more than \$16,000.



Pictured left to right are Thomas W. Easterly, IDEM commissioner; Scott Hunsucker, Brownstown Wastewater Utility superintendent; David Stoltenberg, U.S. EPA Region V O&M coordinator; and Jeff Lubker, Brownstown Wastewater Utility employee.

The Brownstown facility is managed by Scott Hunsucker, Wastewater Utility Superintendent; other department employees are Jeff Lubker, Dale Shelton, and Phil Owens.

The award was presented by David Stoltenberg, O&M Awards Coordinator of U.S. EPA, Region V, Chicago. At the presentation, Mr. Stoltenberg announced that the Brownstown plant was also selected as a National First Place winner. The national awards were presented at the Water Environment Federation's WEFTEC event held in Washington, DC on October 31 and November 1-2.

Report Every Overflow!

Failure to report even a single overflow is considered a serious violation and will generally result in initiation of a formal enforcement action by IDEM. Any bypass or overflow must be reported to the Office of Water Quality within 24 hours of the event (and in writing within 5 days). The most convenient way to comply with both these reporting requirements is by faxing a "Bypass/Overflow Incident Report" to IDEM. This form is available on the Web at www.idem.IN.gov/water/publications/appsforms.html#bypass. If the release is resulting in a fish kill, causing severe environmental damage, or qualifies as a spill, an immediate report to IDEM's Emergency Response Section spill response line is also required. The spill response number is (317) 233-7745 or toll free within Indiana at (888) 233-7745.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
INDIANAPOLIS

MEMORANDUM

Date: July 1, 2005

To: All NPDES Permittees who must perform *E. Coli* Testing

From: Bruno Pigott, Assistant Commissioner, Office of Water Quality

Subject: Policy for reporting "Too Numerous to Count" (TNTC) data for *E. coli* testing

Utilization of this TNTC policy should not become necessary in any but the rarest of situations. Any questions regarding this policy should be directed to Barbara McDowell at (317) 233-6464 or bmcdowel@idem.IN.gov.

For testing methods utilizing a membrane filter:

NPDES permits require that the monthly average of *E. coli* be less than 125 colonies per 100 milliliters (mL) of filtered sample. *Standard Methods for the Examination of Water and Wastewater*, 20th Edition – page 9-59, indicates that the allowable maximum number of colonies per plate (filter) is 200. The optimum count is in the range of 20 to 80 colonies, with an ideal sample yielding about 50 colonies. If no filter has a count falling in the optimum range, meaning in the range of 20 to 80 colonies, total the colonies on all filters and report as number per 100 mL (See 20th Edition – page 9-61 for detailed examples).

Even though filtration of 100 milliliters (or lesser volumes) normally produces an acceptable colony count for disinfected effluent, occasionally the count for these normally acceptable dilutions may exceed 200 colonies per plate.

To prevent such an occurrence we are strongly recommending that laboratory personnel routinely run a 1.0 milliliter dilution along with the normally acceptable dilutions for each test.

If all dilutions for that test, including the 1.0 mL dilution, result in plates (filters) that are deemed "too numerous to count" (TNTC), the number reported for the 1.0 mL test should be 63,200. This number should be reported on the Monthly Report of Operations (MRO) as the *E. coli* result for that day and should be included in the monthly average calculation.

Justification: If the 1.0 mL plate is deemed TNTC, then the actual count is likely to be somewhere between 20,000 (maximum count for a 1.0 mL dilution) and 200,000 (maximum count for a 0.1 mL dilution). The TNTC number of 63,200 is the geometric mean of those two numbers.

For the Colilert using Quanti-tray procedure:

Even though filtration of 100 milliliters (or a lesser volume that you have determined) normally produces an acceptable Quanti-tray, very occasionally these normally acceptable dilutions may result in all wells on the Quanti-tray fluorescing.

To prevent such an occurrence we are strongly recommending that laboratory personnel *routinely* run a 10.0 milliliter dilution *along with* the normally acceptable dilution for each test.

If all dilutions for that test, including the 10.0 mL dilution, result in trays that are fully fluoresced, the number reported for the 10.0 mL test should be 76,000. This number should be reported on the MRO as the *E. coli* result for that day and included in the monthly average calculation. (However, if your facility is using an Excel spreadsheet MRO supplied by IDEM, you do not have to alter the default value assigned to TNTC results by the spreadsheet.)

Justification: If the 10.0 mL tray is fully fluoresced, then the actual count is likely to be somewhere between 24,192 (maximum count for a 10.0 mL dilution) and 241,920 (maximum count for a 1.0 mL dilution). The reportable number of 76,000 is the approximate geometric mean of those two numbers.

Questions about Wastewater Certification or Continuing Education?

Please feel free to contact our program staff about ANY questions you may have regarding your certification or continuing education. Heather Tippey Pierce, wastewater certification coordinator, is available at (317) 233-0479 or htippey@idem.IN.gov, and Jenni Lynch, administrative assistant, is available at (317) 233-0419 or jrylnch@idem.IN.gov. For a printable listing of program staff and their contact information, please visit the program Web site at www.idem.IN.gov/water/compbr/compeval/wwcert.html and click on the "Certification Information" tab.

Operator Certification Without Examination?

Did you know that 327 IAC 5-22-11(g) states:
 "(2) A certified operator holding a valid nonindustrial wastewater treatment certificate for Class I, Class II, Class III, or Class IV may obtain a Class A industrial certificate without examination by submitting an application required by subsection (b) for the Class A certificate.
 (3) A certified operator holding a valid industrial certificate for Class A, Class B, Class C, or Class D may obtain a Class I nonindustrial certificate without examination by submitting an application required by subsection (b) for the Class I certificate."

Please contact a wastewater certification staff member for an application and information. The normal \$30 application fee is required.

Mercury Outreach Materials Available



IDEM's Office of Pollution Prevention and Technical Assistance created materials to assist municipalities in implementing a mercury pollution prevention program. Information can be found at www.idem.IN.gov/mercury/potw/. For further details, contact Bobbi Steiff at (800) 988-7901 or (317) 233-6662, or via e-mail at rsteiff@idem.IN.gov.

Top Scorers for the April 2005 Wastewater Certification Exams

Municipal

Class I-SP	Paul Sembach
Class I	Ryan Herron
Class II	Staci Floyd
Class III	Travis Williamson
Class IV	Leonard Ashack

Industrial

Class A-SO	John Humes
Class A	Brian Beeler
Class B	Nancy Erhart
Class C	Larry Reynolds
Class D	Becky Howell

Overall Statistics

There were 447 operators admitted to the spring 2005 exam; 30 of which either made postponement arrangements or failed to show. 167 passed the exam and 250 failed. The overall passing rates were 40% for spring 2005, and 55% for spring 2004.

What do you mean I can't renew my license?

PLEASE REMEMBER that at least 70% of your minimum continuing education requirements MUST be in technical training. For example, if you have a Class C certification (minimum of 20 contact hours required for each renewal period) no less than 14 of your continuing education hours must be in technical training. "Technical" training is defined by 327 IAC 5-22-16 (a) (2) (A) (i) as "...matters related directly to wastewater treatment." This rule applies to all certified operators for the renewal of their certification, and the minimum continuing education requirements must be met BEFORE a certificate will be renewed.



Be a CLEAN Community Today!

You may experience:

- Financial benefits,
- Public recognition,
- Increased efficiency,
- Reduced costs,
- Better communication,
- Improved awareness,
- Priority support, and more!

*To learn more about the Indiana
CLEAN Community Challenge,
visit IDEM's Web site:*

**[www.cleancommunities.
IN.gov](http://www.cleancommunities.IN.gov)**

Indiana Department of Environmental Management

Office of Water Quality

Compliance Branch

Compliance Evaluation Section

MC 65-42

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